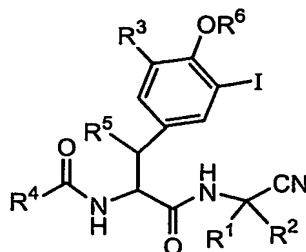


WE CLAIM:

1. A compound of Formula I:



I

wherein:

R^1 and R^2 are independently hydrogen, alkyl, haloalkyl, hydroxyalkyl, aryl, or aralkyl; or

R^1 and R^2 together with the carbon atom to which they are attached form cycloalkyl or heterocycloalkyl;

R^3 is alkyl or iodo; and

R^4 is selected from the group consisting of aryl, heteroaryl, or heterocycloalkyl wherein R^4 is optionally substituted with one, two or three R^a wherein:

each R^a is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl wherein R^a is optionally substituted with one, two or three R^b wherein:

each R^b is independently selected from the group consisting of alkyl,

alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl wherein each R^b is optionally substituted with one, two or three substituents independently selected from alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, carboxy, alkoxycarbonyl, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, cyano, or nitro;

R⁵ and R⁶ are independently hydrogen or alkyl;

or a pharmaceutically acceptable salt thereof.

2. The compound of Claim 1 wherein R¹ and R² are hydrogen.
3. The compound of Claim 1 wherein R¹ and R² form cycloalkyl.
4. The compound of Claim 1 wherein R¹ and R² form heterocycloalkyl.
5. The compound of Claim 1 wherein R¹ is hydrogen and R² is haloalkyl.
6. The compound of any of the Claims 2-6 wherein:
R⁵ is hydrogen or methyl; and R⁶ is hydrogen or methyl.
7. The compound of Claim 6 wherein R³ is alkyl.
8. The compound of Claim 6 wherein R³ is iodo.
9. The compound of Claim 7 wherein:

R⁴ is aryl, heteroaryl, or heterocycloalkyl optionally substituted with one, two or three R^a wherein:

each R^a is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl,

alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl wherein R^a is optionally substituted with one, two or three R^b wherein:

each R^b is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, cyano, acyl, carboxy, or alkoxycarbonyl.

10. The compound of Claim 8 wherein:

R⁴ is aryl, heteroaryl, or heterocycloalkyl optionally substituted with one, two or three R^a wherein:

each R^a is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl wherein R^a is optionally substituted with one, two or three R^b wherein:

each R^b is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, cyano, acyl, carboxy, or alkoxycarbonyl.

11. The compound of Claim 7 wherein:

R^4 is selected from the group consisting of aryl, heteroaryl, or heterocycloalkyl wherein R^4 is optionally substituted with one, two or three R^a wherein:

each R^a is independently selected from the group consisting of alkyl,
5 alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein
10 the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl provided that R^4 is substituted with at least one R^a that is an aryl, heteroaryl or heterocycloalkyl ring or a group that has an aryl, heteroaryl or heterocyclic ring and further wherein R^a
15 is optionally substituted with one, two or three R^b wherein:

each R^b is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl,
20 dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl provided
25 that R^a is substituted with at least one R^b that is an aryl, heteroaryl or heterocycloalkyl ring or a group that has an aryl, heteroaryl or heterocyclic ring wherein each R^b is optionally substituted with one, two or three substituents independently selected from alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, carboxy, alkoxycarbonyl, amino, alkylamino,
30 dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl,

aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, cyano, or nitro.

12. The compound of Claim 8 wherein:

R^4 is selected from the group consisting of aryl, heteroaryl, or heterocycloalkyl wherein R^4 is optionally substituted with one, two or three R^a wherein:

5 each R^a is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, 10 heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl provided that R^4 is substituted with at least one R^a that is an aryl, heteroaryl or heterocycloalkyl 15 ring or a group that has an aryl, heteroaryl or heterocyclic ring and further wherein R^a is optionally substituted with one, two or three R^b wherein:

each R^b is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, 20 alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may 25 be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl provided that R^a is substituted with at least one R^b that is an aryl, heteroaryl or heterocycloalkyl ring or a group that has an aryl, heteroaryl or heterocyclic ring wherein each R^b is optionally substituted with one, two or three substituents independently selected from alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or 30 sulfone, halo, haloalkyl, haloalkoxy, carboxy, alkoxycarbonyl, amino, alkylamino,

dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, cyano, or nitro.

13. The compound of Claim 1 wherein R^1 and R^2 are hydrogen; and

R^4 is selected from the group consisting of aryl, heteroaryl, or heterocycloalkyl
5 wherein R^4 is optionally substituted with one, two or three R^a wherein:

each R^a is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo, haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl,
10 dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl provided
15 that R^4 is substituted with at least one R^a that is an aryl, heteroaryl or heterocycloalkyl ring or a group that has an aryl, heteroaryl or heterocyclic ring and further wherein R^a is optionally substituted with one, two or three R^b wherein:

each R^b is independently selected from the group consisting of alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, halo,
20 haloalkyl, haloalkoxy, nitro, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, aryl, heteroaryl, heterocycloalkyl, arylamino, heteroarylamino, heterocycloalkylamino, aryloxy, heteroaryloxy, heterocycloalkyloxy, arylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heteroarylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, heterocycloalkylthio wherein the sulfur may be oxidized to sulfoxide or sulfone, cyano, acyl, carboxy, or alkoxycarbonyl provided
25 that R^a is substituted with at least one R^b that is an aryl, heteroaryl or heterocycloalkyl ring or a group that has an aryl, heteroaryl or heterocyclic ring wherein each R^b is optionally substituted with one, two or three substituents independently selected from
30 alkyl, alkoxy, hydroxy, alkylthio wherein the sulfur may be oxidized to sulfoxide or

sulfone, halo, haloalkyl, haloalkoxy, carboxy, alkoxycarbonyl, amino, alkylamino, dialkylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, cyano, or nitro.

14. A pharmaceutical composition comprising a compound of any of the Claim 1-
5 14 in admixture with one or more pharmaceutically suitable excipients.

15. A method of treating a disease in an animal in which inhibition of Cathepsin
B, can prevent, inhibit or ameliorate the pathology and/or symptomatology of the
disease, which method comprises administering to the animal a pharmaceutical
composition comprising a therapeutically effective amount of compound of any of the
10 Claims 1-14 or a pharmaceutically acceptable salt thereof.